

PENDING CLAIMS

The following is a listing of claims currently pending in the application:

Claim 1 (withdrawn): A method of creating a seal at a target anastomosis site in a blood-vessel comprising the steps of:

providing a low profile shaft assembly having an expandable region and a sealing membrane spanning said expandable region, said expandable region being deployable from a first low-profile position to a second expanded position;

inserting said assembly into a blood vessel and positioning the expandable region at the target anastomosis site;

deploying said expandable region from said first low-profile position to said second expanded position; and

engaging the inner wall of the blood vessel at the target anastomosis site with the expandable region in its second expanded position to create a seal at the target anastomosis site.

Claim 2 (withdrawn): A method of performing multiple anastomoses comprising the steps of:

providing a low profile shaft assembly having an expandable region and a sealing membrane spanning said expandable region, said expandable region being deployable from a first low-profile position to a second expanded position;

inserting said assembly into a blood vessel and positioning the expandable region at a first target anastomosis site;

deploying said expandable region from said first low-profile position to said second expanded position; and

engaging the inner wall of the blood vessel at the first target anastomosis site with the expandable region in its second expanded position to create a seal at the first target anastomosis site;

performing an anastomosis procedure at the sealed first target anastomosis site;

positioning the expandable region at a second target anastomosis site;

engaging the inner wall of the blood vessel at the second target anastomosis site with the expandable region in its second expanded position to create a seal at the second target anastomosis site; and

performing an anastomosis procedure at the sealed second target anastomosis site.

Claim 3 (withdrawn): A method of performing multiple anastomoses comprising the steps of:

providing a sealing member deployable from a first low-profile position to a second expanded position;

inserting said sealing member into a blood vessel and deploying said sealing member from said first low-profile position to said second expanded position; and

engaging the inner wall of the blood vessel at a desired location with the sealing member in its second expanded position to create a seal, the sealed area of the blood vessel being large enough to accommodate multiple anastomoses; and

performing multiple anastomoses at the sealed area.

Claim 4 (withdrawn): The method of claim 3 wherein the deployment of the sealing member is remotely actuated.

Claim 5 (withdrawn): The method of claim 3 wherein said sealing member further comprises a low profile shaft assembly having an expandable region and a sealing membrane spanning said expandable region.

Claim 6 (previously presented): A device for creating a seal in a blood vessel comprising:

a low profile shaft assembly configured for insertion into a vessel, said shaft assembly having an expandable region at the distal end of the shaft assembly and a sealing membrane spanning said expandable region, said expandable region being deployable from a first low profile position to a second expanded position and having an area in its second expanded position;

a protective shield that is deployable over at least a portion of the expandable region in its second expanded position; and

a clamping member positioned generally opposite to and moveable towards said expandable region, said clamping member having a distal end shape corresponding to said expandable region in its second expanded position.

Claim 7 (previously presented): The device of claim 6 wherein said expandable region in its second expanded position has a hexagonal shape.

Claim 8 (previously presented): The device of claim 6 wherein said expandable region in its second expanded position has an octagonal shape.

Claim 9 (original): The device of claim 6 wherein said expandable region in its second expanded position has an oval shape.

Claim 10 (original): The device of claim 6 wherein said expandable region in its second expanded position has a circular shape.

Claim 11 (previously presented): The device of claim 6 wherein said expandable region further comprises segments that bow outwardly from the shaft assembly when the expandable region is deployed from said first low profile position to said second expanded position.

Claim 12 (previously presented): The device of claim 11 wherein at least two of the bowing segments are biased toward the clamping member when the expandable region is deployed from said first low profile position to said second expanded position.

Claim 13 (original): The device of claim 11 wherein said bowing segments are formed of a slitted flexible tube.

Claim 14 (original): The device of claim 11 wherein said bowing segments are formed of a super-elastic metal memory.

Claim 15 (original): The device of claim 6 wherein the sealing membrane is reinforced.

Claim 16 (cancelled)

Claim 17 (previously presented): The device of claim 6 wherein the shaft assembly further comprises a slide operably linked to said expandable region such that translational movement of the slide from a first to a second position deploys said expandable region from said first low profile position to said second expanded position.

Claim 18 (original): The device of claim 17 wherein translational movement of the slide can be remotely actuated.

Claim 19 (original): The device of claim 6 wherein the shaft assembly further comprises a deployment tube moveable in relationship to the expandable region such that translational movement of the deployment tube from a first to a second position deploys said expandable region from said first low profile position to said second expanded position.

Claim 20 (original): The device of claim 19 wherein translational movement of the deployment tube can be remotely actuated.

Claims 21-37 (cancelled)

Claim 38 (previously presented): The device of claim 6 wherein said expandable region in its second expanded position corresponds to an area of a blood vessel that is large enough to accommodate multiple anastomosis sites.

Claim 39 (previously presented): The device of claim 6 wherein said expandable region in its second expanded position has a cup-shaped configuration.

Claim 40 (previously presented): A device for creating a seal in a blood vessel comprising:

a low profile shaft assembly configured for insertion into a vessel, said shaft assembly having an expandable region at the distal end of the shaft assembly and a sealing membrane spanning said expandable region, said expandable region being deployable from a first low-profile position to a second expanded position and having an area in its second expanded position;

a deployment tube moveable in relationship to the expandable region such that translational movement of the deployment tube from a first to a second position deploys said expandable region from said first low profile position to said second expanded position; and

a clamping member positioned generally opposite to and moveable towards said expandable region, said clamping member having a distal end shape corresponding to said expandable region in its second expanded position.

Claim 41 (previously presented): The device of claim 40 wherein translational movement of the deployment tube can be remotely actuated.

Claim 42 (previously presented): The device of claim 40 wherein said expandable region in its second expanded position corresponds to an area of a blood vessel that is large enough to accommodate multiple anastomosis sites.

Claim 43 (previously presented): The device of claim 40 wherein said expandable region in its second expanded position has a hexagonal shape.

Claim 44 (previously presented): The device of claim 40 wherein said expandable region in its second expanded position has an octagonal shape.

Claim 45 (previously presented): The device of claim 40 wherein said expandable region in its second expanded position has an oval shape.

Claim 46 (previously presented): The device of claim 40 wherein said expandable region in its second expanded position has a circular shape.

Claim 47 (previously presented): The device of claim 40 wherein said expandable region in its second expanded position has a cup-shaped configuration.

Claim 48 (previously presented): The device of claim 40 wherein said expandable region further comprises segments that bow outwardly from the shaft assembly when the expandable region is deployed from said first low profile position to said second expanded position.

Claim 49 (previously presented): The device of claim 48 wherein at least two of the bowing segments are biased toward the clamping member when the expandable region is deployed from said first low profile position to said second expanded position.

Claim 50 (previously presented): The device of claim 48 wherein said bowing segments are formed of a slitted flexible tube.

Claim 51 (previously presented): The device of claim 48 wherein said bowing segments are formed of a super-elastic metal memory.

Claim 52 (previously presented): The device of claim 40 wherein the sealing membrane is reinforced.

Claim 53 (previously presented): The device of claim 40 further comprising a protective shield that is deployable over at least a portion of the expandable region in its second expanded position.

Claim 54 (previously presented): The device of claim 40 wherein the shaft assembly further comprises a slide operably linked to said expandable region such that translational movement of the slide from a first to a second position deploys said expandable region from said first low profile position to said second expanded position.

Claim 55 (previously presented): The device of claim 54 wherein translational movement of the slide can be remotely actuated.